

SWBAT: define frequency, and sound

Jan 4-7:20 AM

Welcome!!!

SECA Physics
Tuesday 7 April 2015

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* Pick up:

- blue concept sheet
- whiteboard, eraser, crayon
- slip of paper (for later)



Opening Question:

Check in with a neighbor: What would frequency mean for the waves in this picture?

How many waves per sec.

Centering



Sep 7-7:04 AM

Daily 3 Questions


- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

FYI...

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

Concept Sheet				
We'll fill in two terms (rows) today.				
~ 7 rows when we're done...				
Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ.} = \frac{\#}{\text{TIME}}$	f	hertz $\text{Hz} = \frac{1}{\text{sec}}$... 

Feb 18-6:50 AM

What does FREQUENCY mean (in physics)?

How often something happens

Repeating events per unit time

60 DOTS IN 10 SECONDS

$$f = ? = \frac{\#}{\text{TIME}} = \frac{60}{10 \text{ s.}} = 6 \text{ Hz} \quad 6 \text{ hertz}$$

6 per sec. 6/sec

SMILEY FACES HOW MANY IN 1 MIN.

6 FACES IN 1 MINUTE

$$f = ? = \frac{6 \text{ FACES}}{60 \text{ sec.}} = 0.1 \text{ Hz} \quad 0.1/\text{sec}$$

$$f = \frac{\#}{\text{TIME}} = \frac{6}{1 \text{ MIN}} = 6 \text{ per min}$$

HOW MUCH TIME TO MAKE 1 FACE?

$$\frac{6 \text{ FACES}}{60 \text{ sec}} = \frac{60 \text{ sec}}{6}$$

1 FACE = 10 SECS

Apr 12-7:13 AM

Wave: a wiggle in time and space

Think of three examples of "waves" = wiggles in time and space

EYEBROWS

TOOTH

WATER

DOG TAIL

BABIES

PROJECTOR

LIGHT WAVES

SOUND

WAVING

FLAG

What about Ruffles potato chips? WAVY, RIDGES

~~X TIME~~

NOT A PHYSICS WAVE

Apr 8-9:02 AM

http://www.youtube.com/watch?v=QxD_-e-GkmY&feature=related

Sound experiment:

<http://www.youtube.com/watch?v=ce7AMJdq0Gw&feature=related>

What is he doing? What's happening?

TURNED ON BELL

TURNED ON VACUUM PUMP

↳ SUCK AIR OUT OF JAR

↳ BELL GOT QUIET

BARELY HERE IT

LET AIR BACK IN

↳ GOT LOUD AGAIN

Mar 29-7:38 AM

Flip

WHAT DO YOU THINK YOU KNOW
ABOUT SOUND?

SOUND IS A WAVE THAT TRAVELS THROUGH
A MEDIUM.

↳ AIR
WATER
SOLIDS

Apr 12-9:37 AM

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CP: Describe some evidence that sound can travel through a medium other than air.

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Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) What are the units for measuring frequency?

Hz per sec.
hertz 1/sec.

2) What happened when the guy took the air out of the jar with the bell ringing?

QUIETER

3) Sound is a **WAVE** that travels through a medium.

Apr 12-7:15 AM